

Patent claims

1. A production machine comprising associated machine components including a drive, at least one parallel open loop or closed loop control branch, and a detector for measuring and registering at least one positional determination and at least two variables generated during the operation of the machine, wherein a first positional setpoint determination is provided which can be counteracted in said control branch by a setpoint correction derived from a positionally dependent setpoint profile when at least one additional positionally dependent measured variable is exceeded.
2. A production machine according to claim 1 wherein the drive is selected from the group consisting of hydraulic, electric and a combination of hydraulic and electric.
3. An injection molding machine for the manufacture of plastic parts comprising an advancing screw for driving the injection and generating an injection pressure, said machine further comprising means for detecting and registering the injection pressure and position of said screw as measured variables during operation, said screw having at least one speed/displacement profile variable and a pressure/displacement profile variable wherein the at least one speed/displacement profile variable can be predetermined as a positionally dependent setpoint value which can be counteracted if the pressure/displacement profile variable is exceeded.

4. The injection molding machine according to claim 3 further comprising a mold having at least two positionally dependent variables, wherein at least one speed/displacement profile variable can be predetermined as a positionally dependent setpoint value which can be counteracted if a mold closing pressure/displacement profile variable is exceeded.

5. The injection molding machine according to claim 4 further comprising an ejection mechanism in association with the mold, wherein said mechanism has at least two positionally dependent variables and wherein at least one speed/displacement profile variable can be predetermined as a positionally dependent setpoint value which can be counteracted if an ejecting force/displacement profile variable is exceeded.

6. The injection molding machine according to claim 3 further comprising a speed/time profile and a measured variable/time profile.

7. The injection molding machine according to claim 3 wherein the speed displacement profile and measured-variable/displacement profile is replaced respectively by a speed/time profile and measured-variable/time profile.

8. The injection molding machine according to claims 6 and 7 wherein the speed/time profile and/or measured-variable/time profile can be predetermined.

9. The production machine according to claim 1 comprising the machine components of an industrial press.

10. A method for the open-loop control of a production machine according to claim 1 comprising the steps of registering at least one actual position of a movement in a first control branch inputting a setpoint by means of at least one speed/displacement profile variable; and inputting in a second control branch a setpoint at least one positionally dependent measured —variable/displacement profile, said setpoint is counteracted if said profile is exceeded.

11. A method for the open-loop control of the injection-molding machine according to claim 3 comprising the steps of registering at least one actual position of movement; inputting a setpoint by means of at least one speed/displacement profile variable; and inputting in a second control setpoint for least one positionally dependent measured-variable/displacement profile, said setpoint being counteracted if said profile is exceeded.

12. A method according to claim 11 wherein the injection-molding machine further comprises a mold the positional determination of which is a function of the closing/opening speed and for the opening and/or closing pressure of the mold.

13. A method according to claim 12 wherein the mold further comprises an ejection mechanism, the positional determination of which is a function of the speed and/or ejection force of the ejection mechanism.

14. The method according to claim 11 for use with an injection molding machine according to claim 6.

15. The method according to claim 11 for use with the injection molding machine according to claim 7.

16. The method according to claim 14 wherein at least one profile is predetermined.

17. The method according to claim 15 wherein at least one profile is predetermined.

18. The method according to claim 10 for use with an industrial press.